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Connecting Primary Care Practices with Hard-to-Reach Adolescent Populations: A Report from SNOCAP-USA

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Disclosures

I have no financial
relationships to disclose

Personal Disclosure

I have made many mistakes in my professional career – and expect this to continue in the future.

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Problem Statement

- Adolescents (11-17 years of age) constitute 17% of the population of the U.S., but are responsible for only 7% of medical office visits. ¹
- Primary care providers have relatively less opportunity to evaluate and counsel adolescents in their offices than most other patients.
- Delayed engagement with health care is known to contribute to late recognition/diagnosis of health problems in adolescents. ²

1. Sarmiento, O. L., Miller, W. C., Ford, C. A., Schoenbach, V. J., Adimora, A. A., Viadro, C. I., et al. (2005). Routine physical examination and forgone health care among Latino adolescent immigrants in the United States. *J Immigr Health*, 7(4), 305-316.

1. Klein, J. D., & Wilson, K. M. (2002). Delivering quality care: adolescents' discussion of health risks with their providers. *J Adolesc Health*, 30(3), 190-195.

Project Underpinnings

- Improved engagement and communication between adolescents and their primary care providers could increase the likelihood that effective preventive services and health care are provided.
- It could also improve the efficiency of health care services for adolescents, in terms of appointments kept and adherence to recommended screening or treatment recommendations.

Two-Part Strategy

- Two interventions were implemented (with IRB approval) in each of the four recruited practices to reach adolescents over a 12-month period:
 - a) Use of a commercially available, in-office health risk assessment tool/screener (Rapid Assessment for Adolescent Preventive Services - or RAAPS), and
 - b) The use of social media and the internet (Facebook) to establish linkages between practices and their adolescent patients

Setting

Purposively recruited four practices, in Colorado

- Two Federally Qualified Health Centers (FQHCs), one suburban and one rural, each serve a large Latino population with a catchment area of populations from lower socioeconomic groups.
- One rural practice from the frontier region of Colorado's eastern plains.
- One practice from an urban integrated care system dedicated solely to serving children and adolescents.

Methods

- Stakeholder Engagement:
 - Interventions developed with an advisory panel of practice representatives (clinicians/staff)
 - Each of the four practices nominated adolescent patients from their practices to participate in a feedback and refinement groups (n=15)
 - Also discussed was the use of available adolescent health risk assessment tools. Ultimately, the RAAPS product was identified for use in this Project

Facebook

- Created a Facebook Page (Colorado Teen Health Connect) that represented all four practice sites and was administered by research personnel.
- Only administrators were able to upload posts and updates. Adolescents were able to 'Like' the page and comment on posts and updates to foster interaction
- Created a blog to facilitate longer and more permanent posts on health related topics for the practices.

RAAPS

- The tool asks youth friendly questions addressing risk behaviors in diet, exercise, violence/safety, substance use, unintentional injury, depression/suicide, and sexuality.
- It can be administered in an average of 5 to 7 minutes using either paper printed survey or electronic format on a notebook computer with internet access. The electronic version of the screener was both secure and HIPAA-compliant .

Evaluation: Mixed Methods

Table 1 Quantitative Data Collection

Data Collection	Participants (n)	Data Collection Period	Tool
In-office screener (RAAPS)	All adolescents who have clinic appointments (n=321)	In waiting room, before each visit	Completed on iPad or paper
Post-visit survey	All adolescents who have clinic appointments (n=246)	Provided before clinic visit; returned after clinic visit.	Brief questionnaire (on postcard), given with the screener
Behavioral survey: baseline	All adolescent patients 13-18 who have had a clinic visit in the last 18 months	Before implementation of in-office screener and out-of-office components	Mailed questionnaire
Behavioral survey: six-month follow up	Only those providing parent/guardian consent and patient assent (n=92 consented)	Six months after baseline behavioral survey	Mailed questionnaire
Documentation discussion of health risks	n/a (no direct participants) (n=200 charts)	Pre and post-intervention	Chart abstraction
Usage statistics for	n/a (no direct participants)	Ongoing during 12 month	Google analytics;

Table 2: Qualitative Data Collection

Data Collection	Participants (n)	Data Collection Period	Method/Tool
Utility of online interventions for patients	Adolescents (n=2; total n=8)	End of intervention.	Talk-aloud, semi-structured interview
Effort and workflow concordance of screener and out-of-office outreach	Staff (n=2; total n=8)	End of intervention.	Semi-structured interview
Clinical utility of the screener and online interventions	Providers (n=2; total n=8)	End of intervention.	Semi-structured interview
Refinement of manual that is developed	Practice manager and practice director (n=2; total n=8)	End of intervention.	Semi-structured interview

Results: Facebook

- The Facebook page had a total of 136 fans (mostly females, 68%) with posts receiving an average of 73 views, 21 unique views from a friend of a fan, and 4 shares.
- Posts that were pictures, images or graphs were the most popular whereas text posts were the least.
- The page was well maintained by any practice.
- Twelve percent of the respondents (n=30) reported that their practice visit was related to the 'Colorado Teen Health Connect Facebook Page'.

Results: Adolescent Survey

- Over 2000 adolescents from the adolescent patient population of each practice were invited to participate in the ABCS of which 105 consented (5.3%).
- The baseline survey had an 87 percent response rate (n=92) and the six-month follow-up survey had a 63 percent response rate (n=67).
- Results found a significant increase in reported physical activity ($p=0.04$), a significant increase in the number of sexual partners ($p=0.045$), a significant decrease in the number of times in the past 30 days they rode in a car with a driver that was intoxicated ($p=0.048$), however there was no statistical change in medical visits or health behaviors and friends health behaviors.

Results: Post Visit Satisfaction

- There were 246 post cards returned after adolescent clinic visits at the four clinics participating in this study.
- There was an even distribution by gender (Female: 51%; Male: 49%)
- Of the respondents, 31 percent (n=77) reported that the computerized screener was helpful for their visit and only 12 percent (n=30) were not able to finish it.

Chart Audit: Descriptive

- Patients were generally female (59.4%) between the ages of 13 and 16 years (77.6%) and were equally distributed between rural (49%) and urban clinics (51%).
- Months between their initial visit and endpoint visit ranged between 2 and 22 months, with a median number of 14 months.

Chart Audit: Multi-Variate

- **Multivariate analyses determined a statistically significant increase in the discussion rate of at least one topic and in the discussion rate of physical activity and/or diet between the two visits ($p < 0.05$).**
- Adolescents seeking care for acute visits had lower rates of discussion compared with adolescents seeking care for follow-up or well child visits ($p < 0.01$).
- Adolescents from urban practices had generally higher discussion rates sexual health and/or alcohol compared with adolescents from rural practices ($p < 0.05$).

Qualitative: Practice

- Results from semi-structured interviews with practice staff and providers identified several benefits to incorporating the screener into the adolescent patient visit:
 - The tool provided a structure to the provision of adolescent health care.
 - The tool aided in identification of risk factors and behaviors, ensured inquiry and coverage of all major risk factors and behaviors, and facilitated discussion.
 - The technology associated with the Tablets and Computer-Based Tools was frequently a problem because the tool required Wi-Fi, the lack of privacy if parents are present, security procedures to prevent the unintentional release of information.

Key Findings/Lessons: From Qualitative Themes: General

- Finding 1: “Selling” Preventive Services to Teens is Difficult
- Finding 2: Practices Don’t Always Have a Formal Approach or Strategy to Connect with Teens, And Believe that They Can Do Better
- Finding 3: Some Practical Solutions May be Out There to Better Link with Teens

Key Findings/Lessons: From Qualitative Themes: Facebook

- Finding 1: The Facebook Portion of This Project Was Not Successful in Improving Adolescent Linkages to Practices
- Finding 2: Key Informants Offered Many Possible Reasons Why the Facebook Intervention Was Not Successful

Key Findings/Lessons: From Qualitative Themes: RAAPS

Finding 1: The Use of Health Assessment Tool Made a Positive Difference in How Our Practice Structures Adolescent Healthcare

- *“...I think it is a great tool and I think that the questions are great on here as they open up that communication with them [adolescents]”*
- *“...I uncovered some patients that are a real time bomb...”*
- *“I was surprised at the amount of information we got, [beyond] what we would get asking [these questions], in person”*
- *“The [assessment tool] made a huge difference in helping me to structure my time with teens, and in working with them to address potential problems”*
- *“I think it did fantastically well, We’ll continue to use [it] I don’t think I’ll ever give them up.*
- *“yes...it was worth it. We have been able to uncover problems we never would have seen.”*

Finding 2: The Technology Associated with the Tablets and Computer-Based Tools Was Frequently a Problem

- While one practice reported the seamless and successful implementation of the assessment tool using the tablet computers, most practices reported having trouble with initial set up.
- Some practices were never able to master the use of the tablet computing technology, and reverted to the use of the tool on paper, with manual data entry of the results into the web-based system after the completion of the visit.

Other Key Lessons

- Concern That The Presence of Parents While Completing the Assessment Tool Could Inhibit Adolescents from Disclosing Health Risks
- It is Important to Work Adolescent Health Assessment Into the Practice Workflow
- Practices Found that They Must Be Prepared to Act Upon Health Risks When they Are Identified
- Practices Were Varied with Respect to Security Procedures to Prevent the Unintentional Release of Health Assessment Information

Concluding Comments

- Our findings present evidence that primary health care providers can be a source of information and guidance on behaviors affecting health and also the key player in adolescent health care that can help reduce or prevent future disease
- More research is needed to address engagement in specific sub groups, concerns with specific health conditions, involvement of school clinics and nurses as a supplement to primary care, and involvement of other community based or private health care providers.
- Future research also needs to address more intensely the use of social media such as Facebook, blogs, Twitter, and interactive medical websites.

Questions?



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